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Full-Scale Tests of Seismic Cable Restrainer Retrofits for Simply Supported Bridges. —Reginald DesRoches, Thomas Pfeifer , Roberto T. Leon, and Tam Lam; 8(4), 191-8 (2003).

Pircher, H.
Optimization of Cable Tensioning in Cable-Stayed Bridges. —D. Janjic, M. Pircher, and H. Pircher; 8(3), 131-7 (2003).

Pircher, M.
Optimization of Cable Tensioning in Cable-Stayed Bridges. —D. Janjic, M. Pircher, and H. Pircher; 8(3), 131-7 (2003).

Popescu, Clara
Risk-Based Expenditure Allocation for Infrastructure Improvement. —Bilal M. Ayyub and Clara Popescu; 8(6), 394-404 (2003).

Priestley, M. J. N.
Assessment of Shear Forces on Bridge Abutments: Simplified Method. —G. Benzoni, M. P. Limongelli, and M. J. N. Priestley; 8(1), 29-38 (2003).

Roberts-Wollman, Carin L.
Closure to "Measurements of Thermal Gradients and their Effects on Segmental Concrete Bridge" by Carin L. Roberts- Wollman, John E. Breen, and Jason Cawrse. — Carin L. Roberts-Wollman, John E. Breen, and Jason Cawrse; 8(5), 341-2 (2003).

Roddis, W. M. Kim
Finite-Element Analysis of Steel Bridge Distortion-Induced Fatigue. — W. M. Kim Roddis and Yuan Zhao; 8(5), 259-66 (2003).

Roeder, Charles W.
Proposed Design Method for Thermal Bridge Movements. — Charles W. Roeder; 8(1), 12-9 (2003).

Rosati, G.
Design and Construction of a Bridge in Very High Performance Fiber-Reinforced Concrete. — A. Meda and G. Rosati; 8(5), 281-7 (2003).

Roussis, Panayiotis C.
Assessment of Performance of Seismic Isolation System of Bolu Viaduct. —Panayiotis C. Roussis, Michael C. Constantinou, Mustafa Erdik, Eser Durukal, and Murat Dicleli; 8(4), 182-90 (2003).

Sarcos-Portillo, Antonio
Inspection and Process of Tension of Cables of General Rafael Urdaneta Bridge. —Antonio Sarcos-Portillo, Alfredo Navarro-Cerpa, and Hildrun García-Legl; 8(4), 223-8 (2003).

Schultz, A. E.
Measurement and Analysis of Distortion-Induced Fatigue in Multigirder Steel Bridges. —D. Jajich and A. E. Schultz; 8(2), 84-91 (2003).

Sen, Rajan
Finite-Element Modeling of Heat-Curved I-Girders. — Rajan Sen, Antoine N. Gergess, and Camille Issa; 8(3), 153-61 (2003).

Sennah, Khaled
Design for Shear in Curved Composite Multiple Steel Box Girder Bridges. —Khaled Sennah, John B. Kennedy, and Said Nour; 8(3), 144-52 (2003).

Shah, Ronak
State of Practice for Positive Moment Connections in Prestressed Concrete Girders Made Continuous. — Makarand Hastak, Amir Mirmiran, Richard Miller, Ronak Shah, and Reid Castrodale; 8(5), 267-72 (2003).

Sherif, Alaa
Stability of Slender Webs of Prestressed Concrete Box-Girder Bridges. —Walter Dilger and Alaa Sherif; 8(3), 138-43 (2003).

Smith, Brian W.
Discussion of "Measurements of Thermal Gradients and their Effects on Segmental Concrete Bridge" by Carin L. Roberts-Wollman, John E. Breen, and Jason Cawrse. —Brian W. Smith and Mary Emerson; 8(5), 340-1 (2003).

Sobanjo, John O.
Florida DOT Project-Level Bridge Management Models. — Paul D. Thompson, John O. Sobanjo, and Richard Kerr; 8(6), 345-52 (2003).

Song, Shin-Tai
Live-Load Distribution Factors for Concrete Box-Girder Bridges. —Shin-Tai Song, Y. H. Chai, and Susan E. Hida; 8(5), 273-80 (2003).

Stewart, Mark G.
Multiple Limit States and Expected Failure Costs for Deteriorating Reinforced Concrete Bridges. — Mark G. Stewart and Dimitri V. Val; 8(6), 405-15 (2003).

Su, Mubiao
Natural Frequency of Railway Girder Bridges under Vehicle Loads. — Jianzhong Li, Mubiao Su, and Lichu Fan; 8(4), 199-203 (2003).

Tang, K. H.
Tuned Mass Dampers for Dual-Mode Buffeting Control of Bridges. — C. C. Chang, M. Gu, and K. H. Tang; 8(4), 237-40 (2003).

Thompson, Paul D.
Florida DOT Project-Level Bridge Management Models. — Paul D. Thompson, John O. Sobanjo, and Richard Kerr; 8(6), 345-52 (2003).

Tindal, Troy T.
Thermal Effects on Skewed Steel Highway Bridges and Bearing Orientation. — Troy T. Tindal and Chai H. Yoo; 8(2), 57-65 (2003).

Tsakopoulos, Paul A.
Full-Scale Fatigue Tests of Steel Orthotropic Decks for the Williamsburg Bridge. —Paul A. Tsakopoulos and John W. Fisher; 8(5), 323-33 (2003).

Val, Dimitri V.
Multiple Limit States and Expected Failure Costs for Deteriorating Reinforced Concrete Bridges. —Mark G. Stewart and Dimitri V. Val; 8(6), 405-15 (2003).

Wang, J. J.
Construction Control of Reinforced Concrete Arch Bridges. —F. T. K. Au, J. J. Wang, and G. D. Liu; 8(1), 39-45 (2003).

White, Kenneth R.
Noncontact Photogrammetric Measurement of Vertical Bridge Deflection. —David V. Jáuregui, Kenneth R. White, Clinton B. Woodward, and Kenneth R. Leitch; 8(4), 212-22 (2003).

Woodward, Clinton B.
Noncontact Photogrammetric Measurement of Vertical Bridge Deflection. —David V. Jáuregui, Kenneth R. White, Clinton B. Woodward, and Kenneth R. Leitch; 8(4), 212-22 (2003).

Wu, Z. S.
Neural Networks for Decentralized Control of Cable-Stayed Bridge. —B. Xu, Z. S. Wu, and K. Yokoyama; 8(4), 229-36 (2003).

Xia, H.
Dynamic Response of Suspension Bridge to High Wind and Running Train. —Y. L. Xu, H. Xia, and Q. S. Yan; 8(1), 46-55 (2003).

Xu, B.
Neural Networks for Decentralized Control of Cable-Stayed Bridge. —B. Xu, Z. S. Wu, and K. Yokoyama; 8(4), 229-36 (2003).

Xu, Y. L.
Dynamic Response of Suspension Bridge to High Wind and Running Train. —Y. L. Xu, H. Xia, and Q. S. Yan; 8(1), 46-55 (2003).

Yan, Q. S.
Dynamic Response of Suspension Bridge to High Wind and Running Train. —Y. L. Xu, H. Xia, and Q. S. Yan; 8(1), 46-55 (2003).

Yokoyama, K.
Neural Networks for Decentralized Control of Cable-Stayed Bridge. — B. Xu, Z. S. Wu, and K. Yokoyama; 8(4), 229-36 (2003).

Yoo, Chai H.
Thermal Effects on Skewed Steel Highway Bridges and Bearing Orientation. — Troy T. Tindal and Chai H. Yoo; 8(2), 57-65 (2003).

Zhao, Yuan
Finite-Element Analysis of Steel Bridge Distortion-Induced Fatigue. — W. M. Kim Roddis and Yuan Zhao; 8(5), 259-66 (2003).